Notice of Allowability	Application No.	Applicant(s)	
	10/787,216	KAMIJO, HIDEAKI	
	Examiner	Art Unit	
	Amanda H. Merlino	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *application filed 2/27/04*.

2. ☒ The allowed claim(s) is/are *1,3 and 5-10*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 2/27/04 & 5/25/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jeffrey Wyand on 5/30/06.

The application has been amended as follows:

1. (Currently Amended) An inspection apparatus for inspecting a target object based on content of a fluorescent component included in the target object, the inspection apparatus comprising:

conveying means for conveying the target object along a conveyance path;

a light-emitting device for emitting light toward the target object conveyed by the conveying means;

a light-detecting device for detecting fluorescence emitted from the target object when irradiated with the light; ~~and~~

a fluorescent member disposed on the conveyance path for generating fluorescence in response to light emitted from the light-emitting device; and

controlling means for, before the target object conveyed by the conveying means arrives at an inspection area of the conveyance path, receiving an output signal from the light-detecting device to detect quantity of the fluorescence generated from the fluorescent member, and for controlling quantity of the light from the light-emitting device based on quantity of the fluorescence generated by the fluorescent member

Claim 2 (Canceled)

3. (Original) The inspection apparatus according to claim 1, wherein the fluorescent member is a fluorescence glass.

Claim 4 (Canceled)

5. (Currently Amended) The inspection apparatus according to claim 1, further comprising:

a light-detecting portion for outputting a signal depending on quantity of the fluorescence detected by the light-detecting device;

light source control means for controlling quantity of light emitted from the light-emitting device and for changing, in an analog manner, to a pre-determined quantity of light selected by the light source control means for controlling the quantity of the light emitted;

arithmetic means for calculating changing fluorescence quantity; and

decision means for deciding type of the target object based on the changing fluorescence quantity.

6. (Previously Presented) The inspection apparatus according to claim 5, wherein the arithmetic means calculates the changing fluorescence quantity from changing quantity of illumination by the light-emitting device by second order differentiating output data from the light-detecting portion.

7. (Previously Presented) The inspection apparatus according to claim 5, wherein the decision means decides type of the target object based on a comparison between a pre-determined quantity and the changing fluorescence quantity.

8. (Currently Amended) An inspection method for inspecting a target object based on content of a fluorescent component included in the target object, the inspection method comprising:

detecting a start signal;

calibrating quantity of light emitted from a light-emitting device by

outputting an initial control signal to the light-emitting device,

detecting fluorescence with a light-detecting device while an illuminating member is illuminated by the light emitted by light-emitting device,

deciding an illumination quantity for the light-emitting device by comparing a pre-determined fluorescence and the fluorescence detected until

difference between the pre-determined fluorescence and the fluorescence detected becomes zero, and

outputting the illumination quantity as a corrected control signal;

deciding type of the target object based on fluorescence emitted from the target object illuminated by the light emitted by the light-emitting device; and

continuing deciding the type of the target object until a stop signal is detected.

Claim 9 (Canceled)

10. (Currently Amended) The inspection method according to claim 8, wherein deciding the type of the target object includes:

changing the control signal, based on the corrected control signal, in an analog manner;

calculating a second order differential of changing output from the light-detecting device; and

determining the type of the target object by comparing the second order differential and a pre-determined threshold value.

Reasons for Allowance

Claims 1, 3, 5-8, and 10 allowed.

As to claims 1, 3, and 5-7, the prior of record, taken alone or in combination, fails to disclose or render obvious an inspection apparatus for inspecting a target object comprising a fluorescent member disposed on the conveyance path for generating fluorescence in response to light emitted from the light-emitting device and detected by light-detecting and controlling means for controlling quantity of light from the light-emitting device based on quantity of the fluorescence generated by the fluorescent member, in combination with the rest of the limitations of claim 1.

As to claims 8 and 10, the prior of record, taken alone or in combination, fails to disclose or render obvious an inspection method comprising the steps of detecting

fluorescence with a light detecting device while an illuminating member is illuminated by the light-emitted by the light emitting device and deciding an illumination quantity for the light-emitting device by comparing a pre-determined fluorescence and fluorescence detected until difference between the pre-determined fluorescence and the fluorescence detected becomes zero, in combination with the rest of the limitations of claim 8.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda H Merlino whose telephone number is 571-272-2421. The examiner can normally be reached on Monday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J Toatley, Jr. can be reached on 571-272-2800 ext 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Amanda H Merlino
Patent Examiner
Art Unit 2877
June 8, 2006

for Gregory J. Toatley, Jr.
Supervisory Patent Examiner